POPULATION GROWTH, PROBLEMS, AND TRENDS IN THE UNITED STATES

Donald J. Bogue, Ph.D., and Reynolds Farley, Ph.D.

Past Growth of the U.S. Population

At the present time the population of the United States approximates 195 million and grows by almost three million annually. A population of this size contrasts surprisingly with the number enumerated by the first census in 1790, for that census counted but 3.9 million persons in the original 13 states.

Population growth in the United States fluctuated widely—corresponding to expansion of the land area, changes in the political climate, and the cycles of the economy. Prior to the Civil War the population grew very rapidly—30 per cent or more each decade—and doubled about every 25 years. Both very high birth rates and immigration contributed to this. The opening of the western plains, the acquisition of the southwest from Mexico and the rush to the western seaboard of the late 1840's greatly increased the settled area and attracted European migrants.

The first slowdown in population growth occurred between 1860 and 1870, for the Civil War reduced the number of immigrants. Growth rates for the period between the Civil War and World War I were lower than those for the earlier period—about 2 per cent per annum compared to 3 per cent for the earlier span. Immigration contributed to the post-Civil War growth and the number of immigrants grew. However, as the population gradually became urbanized, birth rates fell while death rates remained constant, leading to slower natural increase.[1]

By 1910 the population reached 93 million. Between that date and 1962 the population doubled and this increase was due chiefly to an excess of births over deaths rather than to immigration or the addition of new states. Yet the population did not increase at a constant rate; instead the growth rate fluctuated, producing an unusual growth pattern. In spite of the prosperity of the twenties, the birth rate continued to fall during that decade and the depression of the thirties dampened fertility even more. However, the prosperity of the forties witnessed a resurgence of fertility and the persistence of these high fertility rates demonstrated that the real problem the United States faced was providing schools and facilities for the burgeoning population.

Population Changes in the Geographical and Rural-Urban Distribution

In 1790, practically all of the population resided along the East Coast. Following the Louisiana Purchase, the midwestern region attracted population and by 1830, the plains area was growing faster than the older eastern or southern regions. Following the Civil War, the far western states became—and still remain—the fastest growing region. Yet even with the westward movement, well over half the population today still lives in the East and the South.

Combined with shifts in the regional distribution has been an increasing urbanization of the population. In 1790, about 5 per cent of the population lived

in urban places and this percentage grew slowly at first; even at the time of the Civil War only one out of five persons lived in cities. The expansion of manufacturing in the late nineteenth century encouraged urban growth but it took the industrial development associated with World War I to produce a highly urbanized population, for the census of 1920 was the first to show the number living in cities exceeded the number in rural places. The movement to cities slackened during the depression, but during World War II more and more of the population moved to cities and this trend continued in the fifties. By 1960, seven out of every ten citizens lived in cities, and between 1950 and 1960, for the first time in history, the rural population actually declined.[2]

The major trends of population movement in the United States have been the following:

1. Migration out of rural areas to metropolitan areas has been taking place rapidly in all sections of the country.
2. There has been an extensive outmigration from low income areas to higher income areas of greater opportunity.
3. There has been a flow of middle and upper income population from the North and East to the South, particularly Florida, the Gulf Coast, Texas, and to the southwest.
4. There has been heavy migration to the Pacific Coast of persons from all strata and from all regions.[3]

In the future many of these trends are likely to continue. Increased agricultural productivity will permit even fewer farmers to feed the growing population, leading to further declines in rural population. Continued growth of most northern metropolitan areas is likely, particularly those with a diversified economic base. However, cities in the southwest and in California will probably grow more rapidly in the short-range future. The location of new installations such as the space craft industry will have much influence on the future growth of many cities and areas.

Future Growth of the U.S. Population

Before discussing some of the changes in the social and economic structure of the United States, it is necessary to know what the future size of the population will be. In July, 1964, the Bureau of the Census issued an updated set of population estimates which utilized new technics for making projections. Changing mortality rates, the fluctuating fertility rate, and the net number of migrants determine what the future population will be, and any set of projections must consider these variables.

In the past, the lengthening of the life span has contributed heavily to population increases. In the 55-year period between the turn of the century and 1955, life expectation increased from approximately 48 to 70 years.[4] In spite of medical advances, life expectation has increased very little in the past ten years, apparently because most deaths are now caused by degenerative diseases associated with old age and limited progress has been made in curing or preventing these diseases. Since substantial increases in the life span are not likely to occur in the immediate future, it is possible to project population assuming only slight improvements in mortality.[5]

Annually, about 300,000 immigrants enter the United States, a number fixed by Congress, and in projecting population the Census Bureau assumed the number would remain at 300,000.

The major component of population growth, the one most susceptible to fluctuation, and the element subject to individual control is fertility. A large variety of fertility measures exist, but one concise way of measuring fertility performance is to consider a group of women born in a particular time period and the total number of children they bear. This is a cohort fertility measure and can be calculated for women born

in various time spans to ascertain the historical trends of fertility. For instance, there were almost 5,000 children born to each 1,000 women born in the United States in the ten-year period preceding the Civil War.[6] The number of children ever born declined consistently and women born between 1905 and 1909—women whose prime childbearing years coincided with the depression—had fewer offspring than any other group of women. This cohort had less than 2,200 children per 1,000 women, giving rise to fears that the population was not replacing itself.[7]

The trend toward lower fertility has been reversed and women who participated in the postwar baby boom will bear many more children than older women. For instance, married women in age groups from 30 to 34 and 35 to 39 in 1964 had an average of about 3,000 children per 1,000 women—a number well in excess of the children born to the depression affected cohorts in their childbearing history.[8]

Projections of the future population depend upon assumptions about how many children will eventually be born to various groups of women. Past experience provides little help for making such judgments, for women now in the midst of their childbearing span have already borne more children than the women who recently completed childbearing. If the women from 25 to 29 in 1962 continue to experience the current fertility rates, they would complete their childbearing with an average of 3,800 children per 1,000 women and this seems unreasonably high. It is necessary to go back to cohorts of women born in the post-Civil War period to find fertility performance of this magnitude.[9]

Since fertility behavior may vary in a wide range, the Census Bureau has made four sets of projections, but in each case they assumed that the baby boom would have its greatest impact upon women born between 1932 and 1942. The high assumption was that women born in this period would complete their fertility with approximately 3,500 children per 1,000 women, compared to 3,200 for the low assumption. Declines in fertility in the future were predicted, but the high projections assumed only slight declines and calculated 3,350 children per 1,000 women for groups born after 1952. The low projections implied a more pronounced fall and foresaw only 2,450 children per 1,000 women.[10]

It would take a prophet to predict the future course of the birth rate but there are indications that fertility will remain at a high level. The Growth of American Families study and subsequent surveys, based on probability samples of American women in 1955, 1960, 1962, and 1963, show that very few women desire no children, one child, or more than five children.[11] In a historical context, this fertility rate is quite high, for the last group of native-born women to bear such a large number of children were the women born between 1875 and 1884.

Despite this high fertility, it is clear that the idea and practice of family planning has become almost universally accepted. The Growth of American Families study found that well over 80 per cent of the fecund couples took some steps to limit or space their offspring.[12] The Family Growth in Metropolitan America study, based on a more specialized sample of women, showed that a similar percentage used some contraceptive technic.[13] Since childbearing is apparently subject to rational control, it seems likely that the birth rate will fluctuate in correspondence to the changing economic and social conditions.

Even if the birth rate declines the population will grow rapidly. According to the high fertility assumption, the population will grow at about 1.4 per

cent per year this decade and 1.9 per cent annually after that, implying the population will double in about 40 years. Compared to nineteenth century rates, this growth rate is not exceptionally high, but the numbers added to the population will be huge. Between 1990 and 2000, six million will be added each year instead of the three million added now. Such a growth rate implies that a child born this year will be living in a nation three times as populous as at the present by the time he retires at age 65. Furthermore, population growth at the rate of 1.9 per cent per annum lays the foundation for an astronomical population in the next century. At this rate of increase, the United States would contain over one billion people in less than 100 years. This would be equivalent to moving all the present population of Europe, Latin America, and Africa into the territory of the 50 states.[14]

The low fertility projections assume a growth rate of 1.3 per cent per annum this decade and an eventual stabilization at 1 per cent annually. Even with this growth rate the population will reach 300 million in less than 40 years.

Is It Possible to Support a Larger Population?

Continued population growth in the United States will present challenges and it is interesting to ascertain what they will be. Important to consider is the availability of natural resources and capital, for our highly industrialized society depends upon a supply of land, minerals, technical know-how, and funds available for investment.

In the past, the supply of most resources has been more than adequate and the cost of producing them has continued to decline. What will the situation be like in the future? A detailed study of the supply and demand for resources in the next 40 years has recently been completed by the Resources for the Future.[15] In general, their conclusions are optimistic. Improved agricultural productivity makes it likely that farm output will be more than adequate for the larger population. While severe regional and local water shortages have already appeared there seems little likelihood of national shortages if sufficient planning is done to insure the distribution of water, particularly in western states. Coal reserves will last much longer than the next 40 years, but shortages of oil and gas may arise unless new fields are discovered. Nuclear sources presently provide little energy but will probably become practical before 2000. Shortages of certain metals may arise, but improved recovery technics may permit mining of ores presently considered worthless or technological developments may permit the substitution of metals that are in greater supply.

While the quantity of resources seems sufficient there may be problems of quality and cost, and continued research and development will be necessary to utilize the available resources.

Population Increase and the Schools

The schools were among the first institutions in our society to be affected by the baby boom. Prior to 1952, about two and three-quarters million children entered first grade each year, but once the crop of post-World War II children attained school age, the number of entering children shot up to almost four million and at least until 1970 the number of new first graders each year will remain around four million. The elementary school system felt the full effects of the population boom by about 1959, and the number enrolled in these schools will not increase again sharply until at least 1971. Enrollment after that date depends upon the future course of fertility.[16]

Total high school enrollment depends not only upon the number of people in

the age range from 14 to 17 but the percentage that remain in school. Approximately 13 million students attended secondary schools in the fall of 1964 and this number has been growing by almost one million each year between 1960 and 1964.[17] In the future, the increments in high school population will be much less and by 1970 slightly under 15 million will be enrolled and by 1977 just over 16 million will be in high school. If the birth rate continues its downward movement, high school enrollments will grow slowly after 1977.

Projections of college enrollments to 1980 have been made by the Bureau of the Census, and they indicate a near doubling of college enrollments during the decade 1960-1970 and a 50 per cent rise for the decade 1970-1980.[18] Thus from 1960 to 1980, college and professional enrollment will treble in size. Since college and especially graduate training require far more elaborate and costly facilities than high school, the task of educating the children of the baby boom at a high level will be most expensive. The problem of maintaining quality in teaching standards and excellence in student performance under these conditions may be very serious in the next two decades.

Projected changes in enrollment do imply that the United States will have a better educated population in the future. Among the age groups that most recently completed their educations slightly under 60 per cent had a high school diploma and about 10 per cent finished college. By 1980 these percentages will change to over 75 per cent with a high school education and 15 per cent with a college degree.

Expanding Size and Changing Composition of the Labor Force

The prosperity of the postwar period facilitated economic growth, and the labor force grew by about one million persons each year. But in the future the number of jobs will have to expand even more rapidly, for the annual increments in the labor force are about to increase sharply.

Table 1, prepared by the Census Bureau, shows what future employment levels will be like (figures in millions)[19]:

Table 1

Year	Size of Labor Force	Annual Increment
1960	73	1.0
1965	79	1.2
1970	87	1.5
1975	94	1.4
1980	100	1.3

The estimate of one hundred million in 1980 will very likely materialize, for all but an insignificant fraction of the workers-to-be have already been born.

In recent years, even with the booming economy, the number of jobs has expanded about as rapidly as the labor force. It remains to be seen whether the economy can absorb new workers at a high rate without gradually building up a large volume of hard core unemployment.

When considering the future growth of the labor force, it is necessary to look at the occupational changes which will ensue from economic growth. Since the turn of the century there has been a movement away from agricultural occupations, first into low skill industrial jobs, and later into skilled industrial occupations and white collar jobs. In the future, the number of farmers and farm laborers certainly will decrease and the number of industrial laborers will probably not increase in spite of growth in the manufacturing and construction industries, for automation will contract the need for unskilled workers.[20] The service occupations will em-

ploy many more persons. Population increases ensure the need for more policemen, firemen, practical nurses, and hospital attendants. Higher standards of living mean that the number of restaurant employees and personal service workers will grow somewhat in the future. Certain industries such as the needle work trades will automate slowly, and the need for other kinds of operative workers such as bus and truck drivers will grow. Craftsmen and foremen required for a rising volume of construction, the increased need for repairmen and the likely growth in the tool, die, and sheet metal fields imply an increased number of skilled workers. The diversification of consumer goods and the expected increase in retail outlets mean that the number of sales workers will probably rise in spite of labor saving innovations. Even faster growth will occur among clerical occupations, for growth in the fields of finance, insurance, and real estate insures that more record-keeping and data-processing employees will be needed even if some of the routine work is transferred to electronic equipment. Slow growth is predicted for the managerial, official, and proprietor occupations but another white collar category, that of professional and technical workers, will be the fastest growing occupational group. The most rapidly expanding professions will probably be in engineering and the natural sciences due to the continued emphasis on the exploration of space, the expansion of medical knowledge, and the research and development programs of industry which will demand more scientific personnel. The probable rise in school enrollments combined with larger government and private expenditures for schools will lead to the employment of larger numbers of teachers, particularly at the higher levels.

With continued economic growth the occupational outlook is thus generally bright for persons able to pursue a white collar occupation and for certain blue collar categories. Those who enter the job market in the future will be better trained than ever before, but job opportunities may be severely limited for that one-third to one-quarter of the population that will enter the job market without a complete high school education.

Difficulties Arising from Continued Population Growth and Change

Even with continued prosperity this country faces some extremely difficult problems in adjusting to the growth and changes of the national population. Two particularly complex but related problems are the following:

(a) Can the Negro population be assimilated in the near future or are Negroes likely to remain segregated and deprived necessitating large expenditures for public assistance and contributing to intergroup conflict?

(b) Can the large central cities prevent blight and decay or are very large areas of these cities destined to become slums?

Changing Characteristics of the Nonwhite Population

In 1940, the Negro population was concentrated in the rural South and employment was mostly in unskilled agricultural and laborer jobs. World War II and the postwar economic boom led to a change in the geographic distribution of Negroes. By 1960, the nonwhite population was more urbanized than the white and 40 per cent lived outside the South.[21] The period from 1940 to 1960 was one of progress for Negroes. Health conditions improved, school enrollment and attainment increased, and more Negroes obtained white collar and industrial jobs. Paradoxically, in spite of this progress, their position vis-a-vis that of the majority group improved very little, and in 1960 Negroes were still generally less healthy,

less well educated, more likely unemployed, earned less, and lived in less desirable housing units. While the Negroes improved their position, the living standard of the majority group also went up and the gap between the two narrowed only a little.

The particular area in which Negroes have made the most progress is education. Data collected by the Census Bureau in 1962 permit analysis of changing educational attainment patterns.[22] While both whites and nonwhites improved their education attainment, it is clear that the improvement has been greater for the latter, thus reducing educational differences. For those finishing school around the time of World War I, whites completed twice as many school years as nonwhites. But for the most recent cohorts the difference is less than one year. Even if this trend persists, a convergence of educational levels will not occur for some time. For instance, among the 18- and 19-year-olds enumerated in 1962, 63 per cent of the whites compared to 41 per cent of the nonwhites have completed high school.

It might be expected that the increased educational attainment of nonwhites would reduce occupational differences and that this would minimize income differences, but the data do not support this contention. Rather, occupational and income differences remain substantial. If young nonwhite workers are compared to older nonwhites, it is apparent that progress has been made, for more of the younger workers hold skilled jobs. However, this same pattern is evident for white workers and color differences persist.[23] Income figures reveal a similar pattern.[24] Thus, rather than "catching up" to the occupational distribution of whites both color groups have followed the same secular trends. Siegel has suggested why this has occurred. Occupational discrimination is least for nonwhites who have very little education or a complete college education, implying that they compete most effectively with whites for jobs at either the top or the bottom of the educational scale. Color barriers are most fixed in the supervisory, managerial, personal service, sales, and craftsmen occupations. Mores and trades union restrictions define many of these jobs as being the domain of white workers only. However, these are the very jobs most often pursued by individuals who terminate their schooling after high school or a year or two of college. And these are the educational levels that nonwhites are increasingly attaining. Siegel argues that nonwhites are unable to translate education into better jobs and more money because they are attaining the educational levels at which discrimination will affect them most adversely.[25]

This suggests that raising the living standards of Negroes will be very challenging in the near future. As the overall standards of living rise, it is likely the aspirations of Negroes will rise also. Unless color barriers fall quickly, intergroup tensions will increase.

Problems of Urban Areas

Many journalists have compared the pleasant life in spacious suburbia to the difficulties of living in the crowded and often dirty cities. Such a picture distorts reality for neither suburban areas nor central cities are so homogeneous. Nevertheless it is true that the population of many central cities is less well off educationally, occupationally, and financially than the population of suburban areas. Cleveland, and its suburbs, typify this pattern. In 1960, 30 per cent of the adults in the city compared to 56 per cent in the suburbs had completed high school. Unemployment was more than twice as common in the city as in the suburbs and the average income of suburban families exceeded that of families living in Cleve-

land by $2,000.[26] This pattern of city-suburban differentiation appears most clearly for the older northern and eastern cities.

The fact that the population of most suburbs is well educated and financially prosperous implies that in the next few decades most suburban areas will be able to meet the problems of their educational system and to improve their physical facilities even if it does mean higher taxes. However, the central cities face rapidly rising costs and a diminishing tax base. The low income groups that live in central cities frequently are the most fertile, necessitating expensive school building programs. Furthermore, many low-income families have to depend upon public assistance for part of their subsistence. The high density of many cities makes it necessary to employ numerous firemen and policemen and the overcrowding of old housing units leads to costly expenditures for urban renewal. The outmigration of the higher income groups from the city at the same time eliminates part of the city's tax base.

Yet the picture is not entirely somber, for each city contains its large "middle class" residential areas and Congress has shown a continued willingness to spend federal tax moneys for urban renewal. Furthermore, it has been suggested that many higher income couples will become tired of daily commuting and suburban living once their children leave home and will opt for newly erected downtown apartments. Nevertheless, large cities will face critical financial problems and the job of mayor is likely to be an extremely difficult one in the near future.

Conclusion

Rapid population growth in the United States does have its costs, and it may be that the high growth rates will make it difficult to raise living standards. However, the developed economy of the United States will not face the Malthusian problems that will occur in certain Asian and Latin American countries. It is probable that the chief difficulty the United States faces is to ensure continuing and expanding economic growth. Natural resources, technical capacity, and available capital may permit faster economic growth which should lead to higher living standards. However, there will be problems, not only of ensuring that this economic growth does occur, but of seeing that income is more equitably distributed. Furthermore, as the economic situation changes certain occupational and geographical groups are bound to be adversely affected, possibly impeding such economic progress.

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Dr. Bogue is professor of sociology and director, Community and Family Study Center, University of Chicago, Chicago, Ill. Dr. Farley is assistant professor of sociology, Duke University, Durham, N. C.

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